

CBO TESTIMONY

**Statement of
Peter Orszag
Director**

Estimated Costs of U.S. Operations in Iraq and Afghanistan and of Other Activities Related to the War on Terrorism

**before the
Committee on the Budget
U.S. House of Representatives**

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Mr. Chairman, Congressman Ryan, and Members of the Committee, I appreciate the invitation to appear before you today to discuss the costs of U.S. operations in Iraq and Afghanistan and the government's activities related to the broader war on terrorism. Those operations and activities have important effects beyond their implications for the federal budget, but my testimony this morning will focus on the narrower issues of the appropriations and obligations to date and the projected costs of the war on terrorism under two different deployment scenarios.

Summary

At the request of Chairman Spratt, the Congressional Budget Office (CBO) has totaled the funding provided through fiscal year 2007 for military and diplomatic operations in Iraq and Afghanistan and other activities associated with the war on terrorism, as well as for related costs incurred by the Department of Veterans Affairs (VA) for medical care, disability compensation, and survivors' benefits. In addition to totaling the funding provided to date, CBO has projected the total cost over the next 10 years of funding operations in support of the war on terrorism under two scenarios specified by the Chairman. Those scenarios are meant to serve as an illustration of the budgetary impact of two different courses in the war on terrorism but are not intended to be a prediction of what will occur.

Including both funding provided through 2007 and projected funding under the two illustrative scenarios, total spending for U.S. operations in Iraq and Afghanistan and other activities related to the war on terrorism would amount to between \$1.2 trillion and \$1.7 trillion for fiscal years 2001 through 2017 (see Table 1).¹ A final section of this testimony briefly compares parts of CBO's estimate to a frequently cited estimate prepared by two academic researchers, Linda Bilmes and Joseph Stiglitz.²

Funding Through Fiscal Year 2007

From September 2001 through the end of fiscal year 2007, the Congress appropriated \$602 billion for military operations in Iraq and Afghanistan and other activities associated with the war on terrorism. In addition, although not explicitly appropriated for that purpose, an estimated \$2 billion has been spent by VA for war-related benefits. Including VA's spending, funding for the war has amounted to \$604 billion. Those sums do not include any funding for fiscal year 2008; activities currently are being funded by a continuing resolution (which is in effect through November 16, 2007).

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1. To the extent that those sums are not offset by reductions in other spending or increases in revenue—and therefore are financed by higher budget deficits—additional budget costs would occur through higher debt-service costs.
 2. Linda Bilmes and Joseph Stiglitz, *The Economic Costs of the Iraq War: An Appraisal Three Years After the Beginning of the Conflict*, Working Paper No. 12054 (Cambridge, Mass.: National Bureau of Economic Research, February 2006).

Table 1.

Estimated Costs of U.S. Operations in Iraq and Afghanistan and of Other Activities Related to the War on Terrorism Under Two Scenarios

(Budget authority in billions of dollars)

	Funding to Date, 2001–2007	Projected Funding, 2008–2017	
		Scenario One: Number of Deployed Troops Reduced to 30,000 by 2010	Scenario Two: Number of Deployed Troops Reduced to 75,000 by 2013
Military Operations and			
Other Defense Activities	533 ^a	485 ^b	966 ^b
Indigenous Security Forces	30	50	50
Diplomatic Operations and Foreign Aid	39	26	26
Veterans' Benefits and Services	3 ^c	9	13
Total	604	570	1,055

Source: Congressional Budget Office.

Note: Details may not add to totals because of rounding.

- a. Funding in 2007 for military operations and other defense activities includes almost \$7 billion to maintain an additional 45,000 personnel on active duty to support ongoing deployments and as part of the Administration's initiative to permanently increase the size of the Army and Marine Corps.
- b. These amounts do not include the cost of the Administration's initiative to increase the size of the Army and Marine Corps, which CBO estimates will cost \$162 billion over the 2008–2017 period.
- c. Includes \$1.6 billion for medical care, disability compensation, and survivors' benefits that CBO estimates has been spent over the 2001–2007 period from regular appropriations for the Department of Veterans Affairs.

According to CBO's estimates, the majority of the \$604 billion appropriated to date—about \$533 billion—has been provided to the Department of Defense (DoD) for U.S. military operations and other defense activities. Such war-related appropriations accounted for more than 20 percent of the department's budget in 2006 and more than a quarter of its budget in 2007. DoD currently is obligating an average of almost \$11 billion a month for expenses associated with its operations in Iraq and Afghanistan and for other activities related to the war on terrorism. Most of that amount (more than \$9 billion per month) is related to operations in Iraq.

The remainder of the \$604 billion has been provided for three categories of spending: Approximately \$30 billion has been provided to establish, train, and equip indigenous security forces in Iraq and Afghanistan. About \$39 billion has been appropriated for reconstruction and relief efforts, diplomatic and consular operations, embassy construction, economic support, and foreign aid. And a total of almost \$3 billion, including both specific appropriations and funds for other costs

incurred by VA, has been provided for medical care and other VA programs to assist former service members affected by their participation in operations related to the war on terrorism.

Projected Costs over 10 Years

On the basis of the two scenarios specified by Chairman Spratt, CBO projected the costs of activities associated with operations in Iraq and Afghanistan and the war on terrorism through 2017. Because DoD does not report detailed operational statistics, those projections—which CBO derived by calculating the ratio between current force levels and funding requested by the Administration for 2008—are rough approximations.³

In the first scenario, the number of personnel deployed on the ground for the war on terrorism would be reduced from an average of about 200,000 in fiscal year 2008 to 30,000 by the beginning of fiscal year 2010 and then remain at that level through 2017. CBO estimates that costs to the U.S. government under this scenario would total \$570 billion over the 2008–2017 period (see Table 1).

In the second scenario, the number of personnel deployed to Iraq and other locations associated with the war on terrorism would decline more gradually, from an average of about 200,000 in fiscal year 2008 to 75,000 by the start of fiscal year 2013 and then remain at that level through 2017. CBO estimates that costs to the government under this scenario would total \$1,055 billion over the 2008–2017 period.

In addition to estimating the costs of the two scenarios over the next decade, CBO recently estimated the potential costs of maintaining a longer-term U.S. military presence in Iraq. The budgetary implications of maintaining such a presence are discussed in Box 1.

Estimated Funding Provided Through Fiscal Year 2007

Since September 2001, lawmakers have provided \$602 billion in budget authority specifically for military and diplomatic operations in Iraq, Afghanistan, and other regions in support of the war on terrorism, as well as for attendant costs related to veterans' benefits and services (see Table 2). Of that amount, about 70 percent has been allocated for the war in Iraq, CBO estimates.

3. The Administration requested \$145 billion for the war in February and another \$5 billion in July. On October 22, the Office of Management and Budget submitted another request for \$46 billion, bringing the total requested for 2008 to \$196 billion.

Table 2.

Estimated Appropriations Provided for Iraq and the War on Terrorism, 2001 to 2007

(Billions of dollars, by fiscal year)

	2001	2002	2003	2004	2005	2006	2007	Total, 2001- 2007
Military Operations and Other								
Defense Activities								
Iraq ^a	0	0	46	68	53	89	113	368
Other ^b	14	18	34	21	18	22	39	165
Subtotal	14	18	80	88	70	111	152	533
Indigenous Security Forces ^c								
Iraq	0	0	0	5	6	3	6	19
Afghanistan	0	0	0	0	1	2	7	11
Subtotal	0	0	0	5	7	5	13	30
Diplomatic Operations and Foreign Aid								
Iraq	0	0	3	15	1	3	3	25
Other	*	2	5	2	2	1	2	14
Subtotal	*	2	8	17	3	4	5	39

Continued

Funding to date for military operations and other defense activities totals \$533 billion, most of which has gone to the Department of Defense. Lawmakers also provided \$30 billion during the 2004–2007 period to train and equip indigenous security forces in Iraq and Afghanistan.⁴ Including the \$30 billion allocated for indigenous security forces, a total of \$563 billion has been appropriated since September 2001 for defense-related activities in Iraq and Afghanistan and for the war on terrorism.

In addition to funding provided for defense activities since 2001, lawmakers have appropriated just over \$39 billion for diplomatic operations and foreign aid to Iraq, Afghanistan, and other countries that are assisting the United States in the war on terrorism. Of that amount, \$16 billion was appropriated for the Iraq Relief and Reconstruction Fund.

Because most appropriations for operations in Iraq and Afghanistan and for other activities related to the war on terrorism appear in the same budget accounts that record appropriations for other DoD activities, determining how much has actually been spent is difficult. However, CBO estimates that appropriations for defense-

4. The \$30 billion includes \$5 billion provided for Iraqi security forces in 2004 in an appropriation for the Department of State's Iraq Relief and Reconstruction Fund.

Table 2.**Continued**

(Billions of dollars, by fiscal year)

	2001	2002	2003	2004	2005	2006	2007	Total, 2001- 2007
Veterans' Benefits and Services ^d								
Iraq	0	0	0	0	0	0	1	1
Other	0	0	0	0	0	0	*	*
Subtotal	0	0	0	0	0	0	1	1
Total	14	19	88	111	81	120	170	602

Source: Congressional Budget Office.

Notes: Details may not add to totals because of rounding.

* = between zero and \$500 million.

- a. CBO estimated funding provided for Operation Iraqi Freedom by allocating funds on the basis of information in budget justification materials and on obligations reported by the Department of Defense. For more information about funding for Operation Iraqi Freedom, see Congressional Budget Office, *Estimated Costs of U.S. Operations in Iraq Under Two Specified Scenarios* (July 13, 2006).
- b. Includes Operation Enduring Freedom (in and around Afghanistan), Operation Noble Eagle (homeland security missions, such as combat air patrols, in the United States), the restructuring of Army and Marine Corps units, classified activities other than those funded by appropriations for the Iraq Freedom Fund, efforts to permanently increase the size of the Army and Marine Corps, and other operations. (For fiscal years 2005 through 2007, funding for Operation Noble Eagle has been intermingled with regular appropriations for the Department of Defense; that funding is not included in this table because it cannot be identified separately.)
- c. Funding for indigenous security forces, which was appropriated in accounts for diplomatic operations and foreign aid (budget function 150) in 2004, and in accounts for defense (budget function 050) since 2005, is used to train and equip local military and police units in Iraq and Afghanistan.
- d. Excludes an estimated \$1.6 billion in spending for medical care, disability compensation, and survivors' benefits for veterans of the war on terrorism. Those amounts are based on CBO's estimates of spending from the regular budget of the Department of Veterans Affairs and were not explicitly appropriated for war-related expenses.

related activities in Iraq and Afghanistan and for the war on terrorism resulted in outlays of about \$430 billion through fiscal year 2007. Of that amount, about \$115 billion was spent in fiscal year 2007—an average of between \$9 billion and \$10 billion a month. Of the funds appropriated for war-related international affairs activities, close to \$30 billion was spent through 2007, CBO estimates.

In addition to the amounts specifically appropriated for war-related activities, including almost \$1 billion in budget authority provided to the Department of Vet-

erans Affairs in 2007, CBO estimates that over the 2001–2007 period, VA has spent almost \$2 billion on assistance to and treatment of service members, veterans, and their families as a result of operations in Iraq and Afghanistan. Those costs cover medical care provided to ill or wounded service members at VA facilities, disability compensation paid to veterans with service-connected disabilities, and dependency and indemnity compensation benefits paid to survivors of service members.⁵

Funding for Fiscal Year 2008

The President's budget proposal for 2008, which was submitted in February, included a request for \$137 billion for military operations in Iraq and Afghanistan and for the war on terrorism; \$5 billion for establishing, training, and equipping indigenous security forces in Iraq and Afghanistan; and \$3 billion for related diplomatic operations and foreign aid. In an amended request submitted in July, DoD requested an additional \$5 billion for mine-resistant and ambush-protected (MRAP) vehicles. On October 22, the Administration submitted a request for another \$46 billion for 2008. If the requested amount is appropriated, the total amount of funding specifically appropriated since 2001 for all operations in the war on terrorism would reach \$798 billion. (Including the estimated \$2 billion that VA has spent from its regular appropriations and the nearly \$1 billion that CBO estimates will be spent in 2008 would bring total funding for the war over the 2001–2008 period to \$801 billion.)

On September 29, 2007, lawmakers enacted Public Law 110-92, a joint resolution making continuing appropriations for fiscal year 2008. That act provided \$5 billion in budget authority for MRAP vehicles. It also extended the \$70 billion in war-related appropriations that was included in the Department of Defense Appropriations Act, 2007 (P.L. 109-289). However, that \$70 billion in funding remains available only until enactment of appropriations for the war for fiscal year 2008, enactment of appropriations for the Department of Defense for fiscal year 2008, or November 16, 2007, whichever comes first.

CBO cannot estimate how much of the funding contained in the continuing resolution will be used before those funds expire or before regular appropriations are

5. That estimate does not include the costs of disability retirement pay, disability severance pay, or Survivor Benefit Plan payments provided by DoD, most of which would be offset by VA benefits. Nor does it include payments from the Servicemembers' Group Life Insurance or Traumatic Servicemembers' Group Life Insurance programs. The additional costs incurred by those insurance programs for claims related to operations in Iraq and Afghanistan are paid by DoD and have been included in the estimate of funding for defense activities. For further discussion, see the statement of Matthew S. Goldberg, Deputy Assistant Director for National Security, Congressional Budget Office, *Projecting the Costs to Care for Veterans of U.S. Military Operations in Iraq and Afghanistan*, before the House Committee on Veterans' Affairs, October 17, 2007.

enacted. Since the temporary funding provided under the continuing resolution will most likely be subsumed in subsequent appropriations for the war for 2008, CBO has not included any amounts for fiscal year 2008 in its tally of funding enacted to date. Estimates of funding for fiscal year 2008, however, are included in the projections of future funding needs, which are described in more detail below.

Estimated Future Funding Requirements

CBO has previously estimated future funding requirements for operations in Iraq and Afghanistan and for other activities related to the war on terrorism under two broad, illustrative scenarios specified by Chairman Spratt.⁶ At the request of the Chairman, CBO has updated its previous projections to account in an approximate manner for the Administration's amended request for increased funding for the war in fiscal year 2008.⁷

Under the first scenario, the number of deployed troops would decline from an average of approximately 200,000 active-duty, Reserve, and National Guard personnel on the ground in fiscal year 2008 to 30,000 in 2010 and would remain at that level over the 2010–2017 period, although not necessarily in Iraq and Afghanistan. In the second scenario, the number of troops deployed overseas would decline more gradually over a five-year period, reaching 75,000 in 2013 and remaining at that level each year thereafter.

On the basis of testimony that General David Petraeus presented to Members of Congress on September 10 and 11, it now appears that the United States will begin reducing current force levels in December. By July 2008, the withdrawal of the additional Army brigades and Marine battalions that were deployed earlier this year as part of the President's strategy to increase the size of forces in Iraq is scheduled to be complete. Thus, the projections for both scenarios in this analysis are based on the assumption that the increased force levels will be sustained for nearly 12 months.

Costs for Military Operations

In the first scenario, the number of personnel deployed in Iraq, Afghanistan, and elsewhere in the war on terrorism would average about 200,000 in fiscal year 2008, decline to approximately 100,000 personnel, on average, in 2009, and then

6. See the statement of Robert A. Sunshine, Assistant Director for Budget Analysis, Congressional Budget Office, *Estimated Costs of U.S. Operations in Iraq and Afghanistan and of Other Activities Related to the War on Terrorism*, before the House Budget Committee, July 31, 2007.

7. CBO has not had time to analyze the amended budget request; however, in testimony before the Senate Armed Services Committee on September 26, Secretary of Defense Robert M. Gates indicated that the requested amount would exceed funding provided for that purpose in 2007 by approximately 10 percent. On the basis of that statement, CBO made a corresponding adjustment to its previous projection. The amended request submitted to the Congress on October 22 was slightly higher than the amount suggested in the Secretary's testimony.

reach 30,000 at the beginning of fiscal year 2010. CBO previously estimated that this case would require \$440 billion in funding over the 2008–2017 period. On the basis of the Administration’s funding request for 2008, that projection could total \$485 billion over the same period.

In the second scenario, deployed forces would average about 200,000 in fiscal year 2008 and then decline to an average of 175,000 troops in 2009. Troop levels would decline steadily each year thereafter until the beginning of 2013 when the number of deployed troops would reach 75,000. In July, CBO estimated that such a case would require \$879 billion in funding over the 2008–2017 period. A projection formulated on the basis of the Administration’s budget request for 2008 could total \$966 billion.⁸

Over the 2005–2007 period, funding for operations in Iraq accounted for 75 percent of all the funding provided for the war on terrorism. A similar distribution of funding seems probable over the next two years. Beyond 2009, however, the allocation of troop deployments and funding to specific operations is highly uncertain.

Costs for Indigenous Security Forces

In developing its estimates, CBO assumed that the cost to train and equip indigenous security forces in Iraq and Afghanistan would be approximately the same under either scenario. To fund that effort, the Administration requested and the Congress provided \$13 billion in 2007—a significant increase over the \$5 billion appropriated in 2006. The Administration stated that the additional funding would enable those countries to field capable police and military forces sooner and that it anticipates less funding will be needed in 2008. On the basis of funding requested for 2008, CBO estimates that DoD would require about \$50 billion over the 2008–2017 period to continue training and equipping indigenous security forces in Iraq and Afghanistan.

Costs for Diplomatic Operations and Foreign Aid

CBO projected the future costs of diplomatic operations and foreign aid in Iraq and Afghanistan on the basis of the amounts provided for those activities in 2007. For that year, the Congress appropriated almost \$5 billion to fund diplomatic oper-

8. The Administration plans to increase the size of the active-duty Army to 547,400 personnel, the Marine Corps to 202,000 personnel, and the Army Reserve and National Guard to 564,200 personnel over the next five years. The request for war funding submitted in February included approximately \$5 billion for that purpose in 2008. Another \$12 billion was included in the regular budget request for 2008. CBO estimated that \$15 billion would be required in 2008 and another \$147 billion would be required over the 2009–2017 period to increase the number of Army and Marine Corps personnel as DoD plans. The Administration has stated that the planned increase is not strictly linked to the deployment of personnel to Iraq and Afghanistan but is needed to improve military capabilities in general. Thus, CBO excludes funding for that purpose from the cost of the scenarios described in this statement. For additional information, see Congressional Budget Office, *Estimated Cost of the Administration’s Proposal to Increase the Army’s and the Marine Corps’s Personnel Levels* (April 16, 2007).

ations, assist local governments, and promote economic development. CBO estimates that, under the two specified scenarios, costs for diplomatic operations and foreign aid would total about \$4 billion for fiscal year 2008—slightly more than the \$3.3 billion requested by the President in February—and \$26 billion over the 2008–2017 period.

Spending by the Department of Veterans Affairs for Medical Care, Disability Compensation, and Survivors' Benefits

CBO estimated spending for medical care, disability compensation, and survivors' benefits on the basis of casualty rates for veterans of operations in Iraq and Afghanistan over the 2003–2006 period. Almost \$1 billion in supplemental appropriations was provided to VA in 2007 for medical administration costs, medical and prosthetics research, medical services for veterans of those operations, and other related purposes. In addition, CBO estimates that VA spent another \$0.7 billion in 2007 for medical care and disability compensation for veterans of operations in Iraq and Afghanistan, as well as for compensation for survivors of service members who died in those operations.

Debt Service

CBO does not typically include debt service in its cost analyses. However, as requested, CBO calculated the debt-service costs associated with spending for operations in Iraq and Afghanistan and elsewhere in the war on terrorism under the assumption that all spending for those operations, both past and present, was financed with federal borrowing.

Under that specified assumption, CBO estimates that interest payments on spending thus far for operations in Iraq and Afghanistan and elsewhere in the war on terrorism would total \$415 billion over the 2001–2017 period. The path of spending generated by the first scenario would add an additional \$175 billion in interest payments from 2008 through 2017. Under the second scenario, interest outlays would increase by a total of \$290 billion over that 10-year period.

Box 1.

Projected Costs of Sustaining a Long-Term U.S. Military Presence in Iraq

In September 2007, the Congressional Budget Office (CBO) estimated the possible costs to the United States of maintaining a long-term military presence in Iraq similar to that maintained by the U.S. government in the Republic of Korea and the Northeast Asia region. Because the nature and scope of such a presence is highly uncertain, CBO projected costs under two possible scenarios. Unlike the projections of future funding requirements discussed earlier in this testimony—which included funding for military operations, indigenous security forces, and diplomatic operations and foreign aid in Iraq, Afghanistan, and elsewhere in the war on terrorism—the scenarios described here include costs only for military operations in Iraq.

To estimate the costs of those scenarios, CBO adjusted current spending levels to account for the scenarios' smaller number of personnel and a lower intensity of operations. CBO did not project current funding levels for procurement because current funding for that purpose includes a number of one-time expenses as well as items not tied specifically to the current pace of operations, which CBO anticipates will not be required indefinitely.

In the first scenario, CBO assumed that the United States would maintain a long-term presence of approximately 55,000 military personnel in Iraq

A Comparison of Cost-of-War Estimates

A number of estimates of the costs of operations in Iraq and Afghanistan have been performed by analysts working outside the government; those estimates are often higher than CBO's. For example, in 2006, two academic researchers—Linda Bilmes and Joseph Stiglitz—estimated that the war in Iraq could cost several trillion dollars in present-value terms, including costs to the federal government as

Box 1.**Continued**

conducting combat operations similar in type to the operations currently carried out in that country. Military units would deploy with their personnel and equipment for specific periods and then return to permanent bases either in the United States or overseas. Such a scenario could have one-time costs of \$4 billion to \$8 billion and annual costs of approximately \$25 billion (in 2008 dollars), CBO estimates. In the second scenario, the United States would maintain a long-term presence of approximately 55,000 military personnel in Iraq by stationing specific units at established bases for an indefinite period in a manner similar to the current practice of assigning personnel to units based in Korea or Germany. Under this scenario, units stationed in Iraq would rarely, if ever, be engaged in combat operations. Up-front costs would be approximately \$8 billion, with annual costs of \$10 billion or less (in 2008 dollars), CBO estimates.

If U.S. military operations in Iraq were to develop into a long-term presence, the numbers of deployed forces could differ substantially from those assumed in either of the two scenarios. Moreover, the scenarios are not mutually exclusive. Over time, the more intensive pace of combat operations could give way to the slower pace of noncombat operations. The first scenario could also be viewed as a transitional phase between the current operations and the more benign environment considered in the second scenario.

well as other economic costs outside the federal budget.⁹ CBO restricts its estimates of war costs to federal budgetary effects and has not attempted to estimate the macroeconomic effects of the war. However, even within the confines of federal budgetary costs, CBO's estimates differ from those of Bilmes and Stiglitz.

9. See Bilmes and Stiglitz, *The Economic Costs of the Iraq War*, p. 9. In addition to estimating costs incurred by the Departments of Defense and Veterans Affairs, Bilmes and Stiglitz assigned a monetary value to the reduction in wounded veterans' quality of life. They also considered the macroeconomic effects of diverting to the war effort federal expenditures from civil projects (for example, the building or maintaining of roads and bridges), as well as additional effects on the U.S. economy resulting from rising oil prices, which the authors largely attribute to the war's disruption of Iraqi oil exports. Bilmes and Stiglitz estimated costs for a projected duration of the war under two scenarios and for as many as 40 years beyond the cessation of hostilities.

Several important differences between CBO's estimates and the Bilmes-Stiglitz estimates are explored below.

Increases in the Regular Defense Budget

Bilmes and Stiglitz estimated that, because of the war, the regular defense budget—the portion not funded through emergency appropriations—increased by a total of \$104 billion to \$139 billion between 2002 and 2006. However, CBO's analysis suggests that most of the budget increases that occurred during that period reflect factors not related to the war, such as inflation, real (inflation-adjusted) pay increases for military and civilian personnel, enhanced personnel benefits that were either enacted before the war or not requested by the Administration as part of its war-funding request, and DoD's efforts to modernize and reconfigure military forces (efforts that were initiated before the onset of the war in Iraq).

Costs to Replace Equipment

Bilmes and Stiglitz estimated that repairing or replacing equipment that had been worn out, damaged, or destroyed in Iraq would total between \$89 billion and \$149 billion in present-value terms over the 2006–2010 period. Those figures, though, do not reflect the cost of replacing and repairing equipment used in Iraq and Afghanistan. Instead, they are based on estimates of the difference between DoD's peacetime procurement budget and the long-term funding required to maintain DoD's inventories of major weapon systems at acceptable levels. Any such funding gap would have nothing to do with operations in Iraq and Afghanistan, which use existing weapon systems and are funded by supplemental appropriations.¹⁰

Costs for Recruiting and Retention Incentives

Bilmes and Stiglitz argued that some of the wartime incentive payments will become permanent, adding between \$1 billion and \$2 billion a year to all future defense budgets, or between \$5 billion and \$17 billion in present-value terms. By contrast, CBO estimates that incentive payments will not permanently increase the defense budget. Furthermore, the cash incentives that Bilmes and Stiglitz quote represent the legislated maximum amounts for active-duty personnel, but those amounts are not paid to every service member. Only personnel who are recruited into a limited number of critical military occupational specialties and who commit

10. The Army estimates that the cost to replace, repair, and upgrade its equipment will total \$12 billion to \$13 billion annually for as long as current force levels in Iraq and Afghanistan are sustained and for up to two years after forces are withdrawn. Army equipment in Iraq and Afghanistan accounts for 80 percent of the total equipment deployed to the two countries by both the Army and Marine Corps; thus, the total cost to DoD to repair and replace damaged and destroyed equipment deployed for operations in Iraq and Afghanistan could total about \$75 billion over the 2006–2010 period. Those figures, as well as the even larger totals for "reconstitution" contained in the Defense Department's supplemental requests, include funding to upgrade equipment, purchase new equipment for the Army National Guard, and buy new equipment for reorganized Army units; such expenses are not directly related to operations in Iraq and Afghanistan.

to a six-year obligation are eligible for the maximum enlistment bonus. Although the maximum authorized reenlistment bonus is \$200,000 for the active component and \$100,000 for the reserve components, reenlistment bonuses averaged about \$10,500 in fiscal year 2005 and \$15,000 in fiscal year 2006. The military has long shown considerable flexibility in setting bonus levels, routinely reducing bonuses for occupations in which manning exceeds authorized levels. Personnel costs are likely to remain higher for the duration of the war, but the military has the authority to reduce incentives in the future if the recruiting climate improves when the war concludes.

Costs to Treat Brain Injuries

Bilmes and Stiglitz estimated that the treatment and care of personnel who suffered serious brain damage in Iraq would cost \$14 billion if the war continued until 2010 and costs accrued over a 20-year life expectancy, or \$35 billion if the war continued through 2015 and costs accrued over a 40-year life expectancy. CBO's analysis suggests that those figures overstate both the number of injured service members who will likely need expensive care for brain injuries and the cost of treating those who do.

Bilmes and Stiglitz estimate that of the 16,000 service members who had suffered nonfatal injuries as of the publication date of their study, 20 percent had incurred serious brain damage. Bilmes and Stiglitz derived this estimate of the incidence rate of brain injuries from a study conducted by Scott Wallsten and Katrina Kosec.¹¹ That estimate, in turn, was based on a research paper by Lt. Colonel Xydakis, an Air Force otolaryngologist (ear-nose-and-throat specialist) and head-and-neck surgeon stationed at Landstuhl Regional Medical Center in Germany.¹² He and his colleagues found that among 2,483 battle-injured patients evacuated from Iraq or Afghanistan and treated at Landstuhl through March 19, 2004, some 21 percent had head or neck trauma. Head or neck trauma, though, differs greatly from traumatic brain injury: neck injuries affect the area below the helmet line and are distinct from brain injuries; and traumatic brain injuries would be treated by neurologists rather than by otolaryngologists. Moreover, the 21 percent incidence rate would at most apply only to those patients evacuated to Landstuhl and classified as "battle-injured," not to the much larger pool of all wounded troops, over half of whom are treated in-country and return to duty within 72 hours. On the basis of a DoD medical census, 1,950 traumatic brain injuries (TBIs) had been

11. Scott Wallsten and Katrina Kosec, *The Economic Costs of the War in Iraq*, Working Paper No. 05-19 (Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, September 2005).

12. Lt. Colonel Michael S. Xydakis and others, "Analysis of Battlefield Head and Neck Injuries in Iraq and Afghanistan," *Otolaryngology-Head and Neck Surgery*, vol. 133, no. 4 (October 2005), pp. 497-504; originally presented at the American Academy of Otolaryngology Head and Neck Surgery Annual Meeting, New York, September 2004.

diagnosed through December 2006 and 2,669 through July 2007 but still not the 3,213 that Bilmes and Stiglitz assert had occurred as early as January 2006.

Perhaps more important, Bilmes and Stiglitz appear to overstate the cost of treating brain injuries among military personnel. Again, they adopted their cost estimates from Wallsten and Kosec, who assumed that all brain injuries, regardless of the degree of severity, would cost as much as “severe head injuries” sustained in automobile crashes, as defined by the National Highway Transportation Safety Administration. On that basis, Wallsten and Kosec estimated costs of between \$600,000 and \$4 million for the lifetime care of a brain-injured victim. Applying those estimates to military personnel with brain injuries, though, is problematic because the two types of brain injuries are quite different: U.S. soldiers wear Kevlar helmets that are capable of deflecting some bullets and shrapnel, or at least of significantly reducing their velocity upon penetration, whereas motorists generally do not wear helmets. Through 2006, about two-thirds of the diagnoses among military personnel were for mild (as opposed to moderate or severe) traumatic brain injuries; more recent tabulations indicate that mild TBIs may represent as much as 80 percent of the total. Most patients should recover naturally from mild TBIs, especially if given prompt treatment. CBO estimates that a few hundred service members—rather than several thousand—have sustained brain injuries serious enough to require a lifetime of around-the-clock care.